

WHAT IS CLAIMED IS:

1. A portable storage device containing network identification information for a processing unit that is connectable to a data communications network and includes a device reader for reading the portable storage device, the portable
5 storage device comprising storage and an access controller, the storage holding a network identity for the processing unit and at least one encryption key, and the access controller being operable to control access to the storage by implementing key-key encryption.
- 10 2. The portable storage device of claim 1, comprising at least one secure storage portion accessible only under the control of the access controller.
3. The portable storage device of claim 2, wherein said at least one encryption key is held in said secure storage portion.
- 15 4. The portable storage device of claim 2, wherein at least one network security encryption key is held in said secure storage portion.
5. The portable storage device of claim 2, wherein a file is configured in said
20 secure storage portion.
6. The portable storage device of claim 2, wherein one or more files containing information are configured in respective secure storage portions.
- 25 7. The portable storage device of claim 2, wherein the access controller is operable to perform key-key verification of a request encrypted by a request key supplied from the processing unit and, in response to the request key verifying correctly, to return to the processing unit an access key derived from said at least one encryption key to permit access to the secure storage portion.

8. The portable storage device of claim 7, wherein the access controller is subsequently operable to respond to a command from the processing unit that is encrypted using the access key to access the secure storage portion.
- 5
9. The portable storage device of claim 2, wherein the storage in the portable storage device comprises random access memory, the secure storage comprising a part of the random access memory.
- 10 10. The portable storage device of claim 1, wherein the access controller is a programmed microcontroller.
11. The portable storage device of claim 1, wherein the portable storage device is a smart card.
- 15
12. The processing unit of claim 1, wherein the network identity comprises a MAC address.
- 20
13. A processing unit connectable to a data communications network, the processing unit having a device reader for a portable storage device that includes storage and an access controller, the storage holding a network identity for the processing unit and at least one encryption key, and the access controller controlling access to the storage by implementing key-key encryption, the processing unit being operable to access a secure portion of the storage of the portable storage device by supplying a key-encrypted request to the access controller, and, in response to receipt of an access key from the access controller, being operable to send an encrypted command to access the content of the storage of the portable storage device.
- 25

14. The processing unit of claim 13, wherein, in response to the return of an access key, the processing unit is operable to use the access key to encrypt a command for access to a secure storage in the portable storage device.
- 5 15. The processing unit of claim 13, wherein the portable storage device is a smart card, the access controller is a microcontroller and the device reader is a smart card reader.
16. The processing unit of claim 13, wherein the network identity comprises a
10 MAC address.
17. The processing unit of claim 13, comprising a service processor, the service processor being programmed to control reading of the portable storage device.
- 15 18. The processing unit of claim 17, wherein the service processor is a microcontroller.
19. The processing unit of claim 13, wherein the processing unit is a computer server.
- 20 20. The processing unit of claim 13, wherein the processing unit is a rack mountable computer server.
21. A control program for a processing unit connectable to a data communications
25 network, the processing unit having a device reader for a portable storage device that includes storage and an access controller, the storage holding a network identity for the processing unit and at least one encryption key, and the access controller controlling access to the storage by implementing key-key encryption, the control program being operable to access a secure portion of
30 the storage of the portable storage device by supplying a key-encrypted request

to the access controller, and, in response to receipt of an access key from the access controller, being operable to send an encrypted command to access the content of the storage of the portable storage device.

- 5 22. The control program of claim 21, wherein, in response to the return of an access key, the control program is operable to use the access key to encrypt a command for access to secure storage in the portable storage device.
- 10 23. The control program of claim 21, wherein the portable storage device is a smart card, the access controller is a microcontroller and the device reader is a smart card reader.
- 15 24. The control program of claim 21, wherein the network identity comprises a MAC address.
- 20 25. The control program of claim 21, comprising a service processor, the service processor being programmed to control reading of the portable storage device.
26. The control program of claim 21 on a carrier medium.
27. The control program of claim 21, wherein the processing unit comprises a service processor, the control program controlling operation of the service processor.
- 25 28. The control program of claim 27, wherein the service processor is a microcontroller.
29. A microcontroller comprising a control program as recited in claim 21.

30. A server computer comprising a device reader for reading a portable storage, a processor, memory and a microcontroller as recited in claim 29, the microcontroller being operable as a service processor and connected to read the content of storage in a portable storage device mounted in the portable storage device.
- 5
31. A method securing encryption keys for use in a processing unit connectable to a data communications network, the method comprising:
- providing a portable storage device for a processing unit that is connectable to the data communications network and includes a device reader for reading the portable storage device, which portable storage device comprises storage and an access controller;
 - providing in the storage a network identity for the processing unit and at least one encryption key; and
 - implementing key-key encryption in the access controller for controlling access to the storage .
- 10
- 15
32. The method of claim 31, comprising defining at least part of the storage in the portable storage device as secure storage accessible only under the control of the access controller.
- 20
33. The method of claim 32, comprising storing said at least one encryption key in said secure storage.
- 25
34. The method of claim 32, comprising storing at least one network security encryption key in said secure storage.
35. The method of claim 31, comprising:
- the processing unit supplying a key-encrypted request to the access controller;
- 30

- the access controller providing key-key verification of the request key supplied from the processing unit; and
- in response to the key-encrypted request verifying correctly;
- returning to the processing unit an access key to permit access to the secure storage;
- the processing unit encrypting a command using the access key to access the secure storage; and
- the access controller responding to the first command to access the first storage.

10

36. The method of claim 31, wherein the network identity comprises a MAC address.